



AED Program

Implementation Guide



*“Public Access
Defibrillation programs
have incredible results.
Not just for victims
and families, but for
everyone. It’s a
powerful thing to save
a life. Being prepared
also has its reward—
peace of mind.”*

*Wayne Currie,
AED Coordinator for the
City of Windsor, Ontario*

Your Guide to Putting a Heart Safe AED Program in Place

Congratulations on your commitment to a Heart Safe AED Program. By placing automated external defibrillators (AEDs) in key locations where people work, live and play, you can help give anyone struck down by sudden cardiac arrest another chance at life.*

Sudden cardiac arrest (SCA) can happen anywhere, anytime—to people of all ages. SCA is usually caused by an electrical malfunction that makes the heart quiver ineffectively in an abnormal rhythm called ventricular fibrillation (VF). It sometimes is triggered by a heart attack, but can also happen even without any blockage of blood flow to the heart. A lifesaving pulse of electricity must be delivered quickly to restore the heart’s normal rhythm and pump blood throughout the body. Defibrillation is the only effective treatment for sudden cardiac arrest caused by VF.

Time is of the essence. Typically, only 5 to 10 percent of people struck down by SCA survive. But if people in VF get the lifesaving AED shock within 3 minutes of collapsing, the survival rate can increase to 74 percent.¹

As you can see, placing automated external defibrillators (AEDs) in key locations, and making sure people are trained to use them, can mean the difference between life and death. Office towers, golf courses, high-rise apartment buildings, community centers, airports, manufacturing plants, schools, and shopping malls are all being equipped with lifesaving AEDs.

No two facilities or organizations will implement an AED program in exactly the same way. To help ensure success, assign a project manager and tailor a program that works for your situation.

* LIFEPAK AEDs are prescription devices intended for use on people in cardiac arrest. They are not for use on children less than 8 years old. Although not everyone can be saved from sudden cardiac arrest, studies show that early defibrillation can dramatically improve survival rates.

Be sure to cover these bases:



Get Ready:

- Assign a project manager
- Gain consensus among stakeholders
- Review federal, state and local laws and regulations
- Consult local emergency medical services (EMS)
- Identify your response team



Get Set:

- Arrange for medical direction
- Choose equipment and vendor
- Design policies and procedures—and keep improving them
- Train response team and plan for refresher training
- Assess how many AEDs you'll need and where to place them
- Develop a budget (equipment, training, promotion)
- Have your legal counsel review your program



Go:

- Buy and deploy AEDs and other supplies
- Promote your program
- Follow your quality assurance plan for people, equipment and procedures

At Medtronic, we're here to help every step of the way. A team of AED specialists is available for consultation as needed. Call your sales representative at 1-800-442-1142 or visit www.aedhelp.com.

"No one likes to think bad things will happen to them, but you never know...having AEDs at our casinos has elevated the standard of what's expected at other facilities."

*Jim Alexander,
Security Officer and
AED User*

Gain consensus among stakeholders

Identify decision makers and arrange a meeting to build support. It helps to form a cross-functional team so people from different areas of your organization buy into the AED program. Building managers, tenants, board members, union leadership and representatives from Human Resources, Environmental Health and Safety, Legal and Risk Management are examples of key players who may need to be consulted. Presentation materials are available to help spread the word about how AEDs can make a difference between life and death.



Review laws and regulations



Some organizations are concerned about their liability for acquiring and using AEDs. In the United States, Good Samaritan laws, giving some immunity to lay people who help others in distress, have been passed in all 50 states. The Cardiac Arrest Survival Act of 2000 encourages placement of AEDs in federal buildings and ensures federal liability protection for those who acquire or use an AED to help save a life.

Laws vary among states, and specific local regulations may apply in your area. Be sure to have your legal counsel and, if appropriate, your risk management team review your program. Typically, AED laws and regulations require:

- Training to operate an AED
- Coordination with the emergency medical service in your community
- Medical direction
- Record-keeping for each use of an AED

For more information regarding state laws pertaining to AED use, contact your sales representative or visit www.aedhelp.com.

Consult local emergency medical services (EMS)



Notifying your local EMS is good practice, and in some locations is a requirement when you implement an AED program. EMS is often pleased to be part of an AED project and can give guidance on equipment choice and placement, training and medical direction. EMS may want to play a role in “drills”

simulating emergencies. This is often a good idea, as it gives everyone a chance to practice and improve each step of the emergency response.

If your community has an “enhanced 9-1-1” system, you may be able to add the locations of AEDs at your facilities to the computer-assisted dispatch system. Then, if someone without knowledge of the AED program calls for help, the dispatcher can let the caller know about the AEDs there, or may contact building security, requesting a response with the AED. They can also talk a user through the process if someone forgets their training.

To download sample forms and letters for notifying EMS, go to www.aedhelp.com.

Determining who is likely to respond in an emergency will affect how and where AEDs are mounted or stored.

Identify your response team

Determining who is likely to respond in an emergency will affect how and where AEDs are mounted or stored. Responders might be:

- ❑ People already expected to provide CPR and first aid in an emergency, such as security staff, high-rise floor wardens, lifeguards, coaches or an existing emergency response team.
- ❑ People trained as part of an AED program, such as flight attendants, church ushers and teachers.
- ❑ Volunteers on the scene, such as visitors and employees who have taken training on their own, in addition to employees trained as part of a formal program. This model is being used successfully at airports and shopping malls.



The size and layout of your facilities also determine how many people you'll want to train to respond.

Arrange for medical direction



Although AEDs are designed for use by laypeople with minimal training, they are classified as medical devices by the U.S. Food and Drug Administration and can't be purchased without a prescription from a physician. This physician often also serves as the "medical director" of an AED program. He or she is not expected to be on the scene when AEDs are used, but provides ongoing medical oversight.

Seek the advice of your local EMS and your program medical director regarding the type of AEDs to buy.

The medical director provides the "standing orders" to be followed in the case of a medical emergency. The physician may sign off on training plans and policies and procedures, update them to take into account new treatment recommendations, evaluate data recorded on an AED during a medical emergency, and help assess each use of an AED to suggest any improvements.

In many states in the U.S., documentation of medical authorization is required to be covered by Good Samaritan legislation.

Medical direction may be provided by:

- A physician employed by your facility (common in large manufacturing firms)
- Local EMS
- An interested physician in the community or local hospital
- LIFEPAK Heart Safe Solutions

Choose equipment and vendor

Seek the advice of your local EMS and your program medical director regarding the type of AEDs to buy. Ask about the reputation of the vendor for reliability, durability, and after-sales support. Selecting a single brand of AED will greatly simplify training and maintenance.



Important considerations include:

- Reputation of the AED manufacturer for product quality and customer service
- Compatibility with the equipment of local EMS
- Easy operation, with clear voice prompts

Policies and procedures aren't a one-time thing. Update them as laws and regulations change, as best medical practices evolve, and as you learn from your own experience using AEDs.

- ❑ Biphasic technology with capability to adjust shocks and energy levels to match the victim's needs
- ❑ Defibrillation electrodes that are pre-connected to save precious seconds
- ❑ Maintenance-free batteries
- ❑ Support such as a service team for on-site repairs and computer-based refresher courses

LIFEPAK® AEDs from Medtronic are ideal for infrequent users, since voice and visual prompts guide users through operation. Automatic self-testing and an always-visible readiness display help assure the device is ready to go. Our total package solution includes service support plans, training, liability indemnification and other options.

Design policies and procedures—and keep improving them

If you already have an emergency response plan, integrate your AED program into it. Policies and procedures aren't a one-time thing. Update them as laws and regulations change, as best medical practices evolve, and as you learn from your own experience using AEDs.



Your policies and procedures should include:

- ❑ Who manages the AED program
- ❑ Who provides medical direction
- ❑ Standing orders stating when the AED should be used, when it shouldn't be used, and training required to use it
- ❑ How internal responders and the community's emergency medical services team will be notified
- ❑ Types and locations of AEDs and other equipment (such as gloves, facemask for CPR)
- ❑ Training and refresher training policy
- ❑ A process and schedule for checking and maintaining equipment
- ❑ A process to periodically review and update the policy and procedures
- ❑ Any records that must be kept each time an AED is used

AED training classes are about four hours long and give possible responders both the skills and confidence to intervene in a cardiac emergency. In some cases, immunity from civil liability applies only to people who have been trained to use an AED.

- ❑ How to handle data recorded by the AED during use (patient's heart rhythm, AED assessment and any shock delivered)
- ❑ What to do after an event, such as downloading and transferring of data from the AED, notifying the medical director, reviewing the event to determine how procedures might be improved, holding a stress debriefing for rescuers, replenishing supplies, and returning the AED to service.

You'll probably find it handy to keep all the pertinent information stored in one binder. Other things you may want to place in the binder: operating instructions, contact information for sales vendor, supply ordering information, training roster, pertinent state laws and local regulations.

A sample policy and procedure can be downloaded from www.aedhelp.com.

Train response team and plan for refresher training



Early access to the emergency medical system means more than training people to use an AED. They should know how to quickly recognize signs of sudden cardiac arrest, notify others as needed, start CPR right away, locate and use the defibrillator, and care for a victim who's been resuscitated until the EMS team arrives. Training should also include specifics of your facility's emergency response plan.

All responders who might use the AED should take standard training classes available through organizations meeting the guidelines of the American Heart Association. Classes are about four hours long and give possible responders both the skills and confidence to intervene in a cardiac emergency. In some cases, immunity from civil liability applies only to people who have been trained to use an AED. Keep good records of people who have been trained, and when they need refresher courses.

Courses may be taught on-site by an independent training company, or at a convenient location in the community. Some facilities have adopted a "train the trainer" approach, where staff become credentialed to instruct the training course. Such courses may be available through a local hospital, community college or local EMS. Your sales representative can also help locate appropriate training.

To achieve a good response time, you'll want enough AEDs in the right places, a clear communications pipeline, and enough people trained to respond quickly.

Once responders have completed the AED course, performing “drills” in the facility are also important parts of the training process. Such drills should be performed with an AED training device that looks like and acts like the “live” AED. This lets you simulate a wide range of possible scenarios and eliminates the need to take a “live” AED out of service. It is also very helpful to conduct these drills in conjunction with local EMS.

Plan for renewal training at least every one to two years—sooner if your policy, procedures or equipment changes. Expect to train new personnel, as turnover reduces your responders pool or new people volunteer. Computer based refresher training (CBT) is a useful tool to keep skills sharp. Choose a CBT program that has been validated to be an effective learning tool.²

A demo download of AED Challenge™, a refresher training program, is available on www.aedhelp.com.

Assess how many AEDs you'll need and where to place them



The American Heart Association recommends defibrillation in less than 4 to 5 minutes—ideally in less than 3 minutes.³ Every additional minute of delay lowers the rate of successful resuscitation by 7 to 10 percent.⁴ To achieve a good response time, you'll want enough AEDs in the right places, a clear communications pipeline, and enough people trained to respond quickly.

Communication systems within your facility greatly impact the time to respond. In the event of a sudden cardiac arrest, how will bystanders alert external emergency medical system teams (EMTs and paramedics) and internal AED responders without delay? Precious time can be saved with automatic notification systems, such as wiring a monitored wall cabinet containing an AED so that opening the door triggers a call to building security. Other notification plans may rely on a receptionist to page an emergency response team (ERT) or make a radio call to a security officer.

Depending on whom you've tapped for your response team, decide whether responders are more likely to be near the AED location (as in the case of a continually staffed security station) or near the cardiac arrest victim (such as coworkers spread throughout a factory or office complex).

Applying an AED and delivering the first shock takes roughly one minute. To meet a goal of less than three minutes from “drop to shock,” that leaves two minutes to get an AED to the victim.

Applying an AED and delivering the first shock takes roughly one minute. To meet a goal of less than three minutes from “drop to shock,” that leaves two minutes to get an AED to the victim (for a security guard to grab an AED and run to the victim, for example, or for a coworker to dash to get an AED and then dash back to the victim). Walking at a brisk pace, you can cover about 300 feet per minute.

Of course you’ll want good coverage of areas where large numbers of people visit, work or assemble, such as cafeterias, auditoriums, gymnasiums, sports facilities, shop floors and offices. Other locations of concern are high-traffic areas such as hallways near restrooms, reception areas and main entrances.

Also consider places:

- ❑ That are harder for emergency medical system teams to reach (such as deep inside a facility, high in a tall building, inside secured areas or remote locations)
- ❑ Where people may be subject to strenuous activity, including exercise
- ❑ With many older people, who are at higher risk for SCA
- ❑ Near hazards such as high voltage electricity

Once you’ve decided who will likely respond, what communications will be relied upon, and which areas to protect, you can determine the number of AEDs and specific locations. There is no one simple formula that applies to all facilities. Walking the facility, carrying a stopwatch and floor plans, is often the best way to decide. Ideally, you want a “drop to shock” time no longer than three minutes.

Consider locating AEDs so they are:

- ❑ Highly visible, such as in wall mount brackets or glass cabinets on building walls in general view—similar to fire extinguishers
- ❑ Near expected responders, such as in security vehicles or at a security or first aid station
- ❑ Close to where the largest number of people spend their time
- ❑ Tied into your communications system to automatically trigger a call to security, or placed near telephones
- ❑ Protected from tampering, theft or damage (recessed mounts and alarmed cabinets are also available)

You might take a phased approach, first placing AEDs in high-occupancy or hard-to-reach areas, and equipping other building spaces in later phases.

Your AED intervention program is no good if no one knows about it. An internal communications campaign will help people become familiar with your program, and inform them how to alert trained responders if they witness a cardiac emergency.

Develop a budget (equipment, training, promotion)

Once a vendor is selected, get a price quote. In addition to the AEDs, budget for:

- Cost of initial training and refresher courses
- Extra defibrillation electrodes
- Supplies such as pocket mask, scissors, gloves, razor (to shave chest hair if necessary), and towel (to dry chest area), which can be stored with the AED
- Training supplies such as AED training devices, extra training electrodes, face masks, manikins, gloves
- Storage units
- Replacement of batteries and electrodes (which have expiration dates even if never used)



Buy and deploy the AEDs and other supplies



Inspect and install your AEDs according to the operating instructions from the manufacturer. Revise any existing facility emergency response plan to reflect that AEDs are in place, spelling out steps to follow in the case of a cardiac emergency.

The AED project manager should follow the maintenance guidelines that are provided in the operating instructions. This includes keeping records of the expiration dates of the consumables (the battery and electrodes) and replacing as needed.

Promote your program

Your AED intervention program is no good if no one knows about it. An internal communications campaign will help people become familiar with your program, and inform them how to alert trained responders if they witness a cardiac emergency.

Communications to other subsidiaries or company branch offices will help ensure that a company or organization as a whole benefits from the AED initiative.

Ways to publicize your program include:

- Posters and brochures
- Decals on doors
- Newsletter articles
- Notice on your intranet and public web site
- E-mail or voicemail notification to employees, or print notices mailed with paychecks
- Announcements at meetings
- Announcements at new hire orientations and notices in employee handbooks
- Information in guest guidebooks (at hotels or shopping malls)
- Pamphlets for guests



Communications to other subsidiaries or company branch offices may help ensure that a company or organization as a whole benefits from the AED initiative.

Consider the merits of a public relations campaign once you activate the AED program. In many cases, a facility that is “telling its story” to the community is accomplishing many things at once. It is helping to be a model and to educate others in the community of the lifesaving value of AED programs. It is showing how it is creating a safe facility for its guests and employees. A public relations campaign may also heighten the awareness of people that spend time at that facility, increasing the likelihood of a faster response in the event of an emergency.

Go to www.aedhelp.com for examples of letters announcing an AED program.

Follow your quality assurance plan for people, equipment and procedures



Once you're up and running, the project manager should be sure to follow the policies and procedures developed to keep the equipment, supplies and trained responders in tip-top shape to handle a cardiac emergency.

On schedule, go through your daily or periodic checklist for devices and supplies. Order new supplies as needed. Schedule training for new members of your response team, and hold refresher training at least every one to two years, more often if needed. This enables your responders to refresh skills, renew certifications, and learn about changes in equipment, policies and procedures. Revise your policies and procedures as you learn from any experience using the AEDs, or as best medical practices change or equipment is updated.

There's no time to lose!

Your AED program is the ultimate benefits package for your employees, customers, tenants and visitors. Get started now on saving more lives.



Medtronic is the world's largest provider of external defibrillators. We've already helped thousands of customers implement AED programs.

The following checklist can help you launch your program.

- Assign a project manager
- Gain consensus among stakeholders
- Review laws and regulations
- Consult local EMS
- Identify your response team
- Arrange for medical direction
- Choose equipment and vendor
- Design policies and procedures—and keep improving
- Train response team and plan for refresher training
- Assess how many AEDs you'll need and where to place them
- Have legal counsel review your program
- Develop a budget (equipment, training, promotion)
- Buy and deploy AEDs and other supplies
- Promote your program
- Follow your quality assurance plan for people, equipment and procedures

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National Training Organizations

American Heart Association, www.americanheart.org

American Red Cross, www.redcross.org

National Safety Council, www.nsc.org

Other Resources

AED help, www.aedhelp.com

Biphasic waveform information, www.biphasic.com

National Center for Early Defibrillation, www.early-defib.org

Guidelines for Public Access Defibrillation Programs in Federal Facilities. Department of Health and Human Services General Services Administration. Federal Register, 66FR 28495, Notice, May 23, 2001

Cardiac Arrest and Automated External Defibrillators (AEDs). Technical Information Bulletin. December 17, 2001. U.S. Dept. of Labor Occupational Safety and Health Administration (OSHA), www.osha.gov/dts/tib/index.html

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Medtronic Physio-Control

Nearly 50 years ago, Physio-Control pioneered the defibrillation technology that offers hope for the hundreds of thousands of people who experience sudden cardiac arrest each year. Hospitals, emergency medical services, targeted responders, and other trained providers rely on our LIFEPAK products every day, in the most critical cardiac emergencies and the toughest of situations.

Physio-Control joined forces with Medtronic, Inc. in 1998. Medtronic, the world leader in medical technology, provides lifelong solutions for chronic conditions such as heart disease, neurological disorders and vascular illness. One major product, the implantable defibrillator, helps protect patients from future cardiac events, enabling them to return to active and rewarding lives.

Our customers want a total, scalable, and customizable solution, not just a device, so we offer a full range of services and complementary products that uphold a tireless commitment to quality, innovation, reliability and service. Because we share one passion with our customers—saving more lives. For more information call 1-800-442-1142 or visit www.aedhelp.com.



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